

This document includes DEQ's responses to the comment letters received during the public comment period which was held from October 14, 2011, through November 14, 2011. The format of this comment response document presents the actual comment submitted followed by staff response. The first twelve comments in this appendix were submitted via a petition letter and also as part of a separate set of comments from The Friends of Lake Anna. While similar in terms of topic, there are slight differences in content between some of the comments in the two submissions. To highlight when these differences occur, staff has designated comments from the petition letter as "a" and the additional comments from The Friends of Lake Anna as "b".

**Public Comment #1:**

- a. How can a permit be issued to a business entity “Lake Anna Environmental Services” that is not registered with the Virginia State Corporation Commission and the previous permit holder ceased to exist in Dec 2010 as a business entity in Virginia.
- b. How can a permit be issued to a business entity “Lake Anna Environmental Services” that is not registered with the Virginia State Corporation Commission (SCC) and the previous permit holder ceased to exist in Dec 2010 as a business entity in Virginia? There is a LAES Inc. registered with the SCC, but that is not the owner or facility name identified on the draft permit or the name identified in your Public Notice Environmental Permit requesting public comments. We believe it is legally required that the permit be issued to a legally recognized person or corporate entity. We ask that DEQ verify the legal existence of the applicant.

***Staff Response:***

Staff has reviewed documentation from the Virginia State Corporation Commission and believes that Lake Anna Environmental Services, Incorporated and LAES, Incorporated are the same registered corporate entity (State Corporation Commission ID 06334270).

By letter dated April 4, 2011, the State Corporation Commission acknowledged a filing for a statement of change of registered office/registered agent. The effective date of the change was April 4, 2011. The registered agent listed by the State Corporation Commission for LAES, Incorporated is the same individual noted on the permit application as the facility contact for Lake Anna Environmental Services, Incorporated. Additionally, the mailing address listed by the State Corporation Commission for LAES, Incorporated is the same address as that provided on the permit application for Lake Anna Environmental Services, Incorporated.

9VAC25-31-100 states that no application for a Virginia Pollutant Discharge Elimination System (VPDES) permit to discharge sewage into or adjacent to state waters from a privately owned treatment works serving, or designed to serve, 50 or more residences shall be considered complete unless the applicant has provided the department with notification from the State Corporation Commission that the applicant is incorporated in the Commonwealth and is in compliance with all regulations and relevant orders of the State Corporation Commission. At this time, the Lake Anna Environmental Services Sewage Treatment Plant (STP) serves forty-eight connections.

**Public Comment #2:**

- a. The previous permit (VA0072079) for Lake Anna Campground expired about 13 Sep 2011 and they can no longer discharge effluent into Lake Anna and are now required to pump and haul to another facility. How can this permit be considered a reissuance of a permit when there is no longer a valid permit? It should be a new permit.
- b. The previous permit (VA0072079) for Lake Anna Campground expired about 13 Sep 2011 and they can no longer discharge effluent into Lake Anna and are now required to pump and haul to another facility. How can this permit be considered a reissuance of a permit when there is no longer a valid permit? It should be a new permit issued to a registered business name that is listed with the SCC and be required to meet all standards/requirements of a new permit.

***Staff Response:***

9VAC25-31-70 specifies the requirements for the continuation of expiring permits. Because the permittee failed to submit a timely and complete application as required, staff could not administratively continue the permit. As a result, the facility is not authorized to discharge.

In accordance with 9VAC25-31-10, a new discharger means any building, structure, facility, or installation: 1) From which there is or may be a discharge of pollutants; 2) That did not commence the discharge of pollutants at a particular site prior to August 13, 1979; 3) Which is not a new source; and 4) Which has never received a finally effective Virginia Pollutant Discharge Elimination System (VPDES) permit for discharges at that site. Because the facility is an existing facility which has previously received a finally effective VPDES permit, it is not a new source and the permit is not considered a new issuance.

Staff has reviewed documentation from the Virginia State Corporation Commission and believes that Lake Anna Environmental Services, Incorporated and LAES, Incorporated are the same registered corporate entity (State Corporation Commission ID 06334270). Please see the staff response to Public Comment #1 for additional information.

**Public Comment #3:**

Louisa County is currently paying hundreds of thousands of dollars to resolve a failed sewage treatment operation in Zion Crossroads due to human failure and the non-compliance of the permit requirement for self monitoring enforcement. Based on the previous record of violations from Lake Anna Environmental Services (LAES) at Lake Anna, this permit should not be renewed. How can the public trust LAES when they had six violations from the period Dec 2010 through July 2011. Likewise the previous facility operator received many violation warning letters.

***Staff Response:***

The facility has received sixteen warning letters (ten of which were received under the previous ownership) between September 2000 and October 12, 2011, for both effluent limit violations and administrative items. Table 1 below describes the nature of the permit violations since 2000. Given that the worst-case, critical conditions underlying development of permit limits rarely occurs, an exceedance of a permit effluent limit does not necessarily translate into an exceedance of the water quality standards. There is no evidence that the effluent limit violations noted below resulted in a water quality issue with Lake Anna. Based on the compliance history of the facility, there is no basis to deny the permit.

Table 1. Summary of Permit Non-Compliance History  
September 2000 through September 2011

<b>Warning Letter</b>	<b>Date of Violation(s)</b>	<b>Reason for Violation</b>	<b>Permit Limit</b>	<b>Reported Value</b>
W2002-12-N-1005	<i>October 2002</i>	<i>Missing DMR</i>	NA	NA
W2003-12-N-1009	<i>October 2003</i>	<i>Missing DMR</i>	NA	NA
W2004-07-N-1019	May 2004	Late submittal of DMR	NA	NA
		CL <sub>2</sub> Inst. Tech Min Limit	0.6 mg/L	0.1 mg/L
W2005-07-N-1013	May 2005	CL <sub>2</sub> Inst. Tech Min Limit	0.6 mg/L	0.0 mg/L
		TSS –Concentration Average	30 mg/L	45 mg/L
W2006-03-N-1017	January 2006	Failure to apply for CTC	NA	NA
		Ammonia – Concentration Max	4.1 mg/L	9.7 mg/L
		Ammonia – Concentration Average	4.1 mg/L	9.7 mg/L
		TSS – Concentration Average	30 mg/L	38.3 mg/L
W2006-11-N-1018	September 2006	Ammonia – Concentration Max	4.1 mg/L	6.4 mg/L
		Ammonia – Concentration Average	4.1 mg/L	6.4 mg/L
W2007-02-N-1010	<i>December 2006</i>	<i>Verify existing or submit new O&amp;M Manual</i>	NA	NA
W2007-03-N-1008	January 2007	Submit groundwater correction plan	NA	NA
W2007-04-N-0007	March 2007	Submit groundwater correction plan	NA	NA
		Incorrect form	NA	NA
		Ammonia – Concentration Max	4.1 mg/L	11.8 mg/L
		Ammonia – Concentration Average	4.1 mg/L	11.8 mg/L

W2008-12-N-1005	October 2008	Unreported parameter – Influent TSS	NA	NA
		Unreported parameter – Influent BOD	NA	NA
		Incomplete DMR	NA	NA
W2011-02-N-1016	December 2010	Unreported parameter – <i>E. coli</i>	235 N/100 mL	NR
		Incomplete DMR	NA	NA
W2011-03-N-1003	January 2011	Unreported parameter – <i>E. coli</i>	235 N/100 mL	NR
		Incomplete DMR	NA	NA
W2011-05-N-1009	March 2011	Failure to monitor – lagoon liner integrity	NA	NA
		Late permit application	3/12/11 (due)	3/17/11 (received)
W2011-07-N-0008	April 2011	Submit revised permit application	4-28-11(due)	5/2/11 (received)
		Concentration Max – CL <sub>2</sub> Inst. Res. Max	0.010 mg/L	0.017 mg/L
		Outdated O&M Manual	NA	NA
W2011-08-N-0008	June 2011	Outdated O&M Manual	NA	NA
		Concentration Max – CL <sub>2</sub> Inst. Res. Max	0.010 mg/L	0.125 mg/L
		Concentration Avg - CL <sub>2</sub> Inst. Res. Max	0.008 mg/L	0.100 mg/L
W2011-09-N-0003	July 2011	Outdated O&M Manual	NA	NA

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NA = Not applicable

NR = Not reported

**Public Comment #4:**

- a. Lake Anna currently provides about 25 different types of recreation for over 3 million annual user days. Over 100 businesses, plus residents and guests from over 5,000 homes around the lake depend on these recreational activities. The demonstrated non-compliance and many violations of the existing sewage treatment plant can negatively effect [sic] residential property values and business income resulting in less tax revenue for the surrounding counties that are necessary to support local and state governmental activities. In addition, the current permit has no closure penalties, so Louisa County would have to absorb all operational activities and cleanup in the event of failure at the expense of the taxpayer which is a non-starter.
- b. Lake Anna currently provides about 25 different types of recreation for over 3 million annual user days. (See attachment “2010 Lake Anna, Virginia User Recreation Days Statistical Summary” for details) Over 100 businesses, plus residents and guests from over 5,000 homes around the lake depend on these recreational activities. The demonstrated non-compliance and many violations of the existing sewage treatment plant can negatively affect residential property values and business income resulting in less tax revenue for the surrounding counties that are necessary to support local and state governmental activities. In addition, the current permit has no closure penalties, so Louisa County would have to absorb all operational activities and cleanup in the event of failure at the expense of the taxpayer which is a non-starter.

***Staff Response:***

Pursuant to Section 62.1-44.18:3 of the Code of Virginia and 9VAC25-650-1, owners and operators of privately owned treatment works with a design flow greater than 0.005 MGD, but less than 0.040 MGD and treating sewage from private residences are required to submit a closure plan and maintain adequate financial assurance in the event the facility ceases operations. This requirement is found within Part I.C of the draft permit.

Additionally, Section 62.1-44.18:3 of the Code of Virginia states “Any person who ceases operations and who knowingly and willfully fails to implement a closure plan or to provide adequate funds for implementation of such plan shall, if such failure results in a significant harm or an imminent and substantial threat of significant harm to human health or the environment, be liable to the Commonwealth and any political subdivision thereof for the costs incurred in abating, controlling, preventing, removing, or containing such harm or threat”.

**Public Comment #5:**

- a. Lake Anna is unique in that it has minimal inflow from the North Anna river and over 90% of the water recirculates between the power plant, cooling lagoons through Dike 3 and back up to the power plant and is heated to over 118 degrees (during the summer). Recently demonstrated failures to many sewage treatment plants due to mechanical, human, earthquakes or floods have resulted in raw sewage being discharged into the receiving stream (in this case it would be Lake Anna). There are other alternatives that are in use today around Lake Anna (common septic system – similar to Lake Anna Food Lion Shopping Center and spraying effluent over the golf course – similar to Cutalong Subdivision that would totally eliminate any sewage effluent discharge into Lake Anna.
- b. Lake Anna is unique in that it has minimal inflow from the North Anna river and over 90% of the water recirculates between the power plant, cooling lagoons through Dike 3 and back up to the power plant and is heated to over 118 degrees (during the summer) and then discharged at over 104 degrees

into public recreational areas. Recently demonstrated failures to many sewage treatment plants due to mechanical, human, earthquakes or floods have resulted in raw sewage being discharged into the receiving stream (in this case it would be Lake Anna).

There are other viable sewage processing alternatives available that would not put nutrients and chemicals/drugs that are flushed down toilets and /or business drains which are not removed as part of the proposed sewage processing system. The alternative sewage processing systems would also replenish the ground water supply as opposed to depleting it, which would be a major benefit particularly in times of drought.

Some of these sewage processing alternatives are in use today around Lake Anna (1) common septic system – similar to Lake Anna Food Lion Shopping Center - Note: other communities have used this alternative to also provide common recreational areas (baseball, soccer, football, etc. on top of the drain field making it a win-win for both the developer and the community). (2) Spraying effluent over the golf course – similar to Cutalong Subdivision nearby that would totally eliminate any sewage effluent discharge into Lake Anna. (3) Also the effluent could be pumped to a free-flowing stream (not Lake Anna) that is used by other sewage plants (4) a future regional sewage processing authority that discharges its effluent into a free-flowing stream (not Lake Anna) authority [sic] should also be considered as an alternative.

#### ***Staff Response:***

The Virginia State Water Control Law does not require the reuse of wastewater. Section 62.1-44.2 of the State Water Control Law states in part “It is the policy of the Commonwealth of Virginia and the purpose of this law to...promote and encourage the reclamation and reuse of wastewater in a manner protective of the environment and public health.” While DEQ supports the reclamation and reuse of wastewater, State Water Control Law does not give the Commonwealth of Virginia authority to mandate reclamation and reuse of wastewater.

Similarly, staff does not have the authority to specify the disposal options referenced by the commenter. The permit was drafted based on the application received, and was prepared to protect the Virginia Water Quality Standards (9VAC25-260 et seq.) applicable to the receiving stream, Lake Anna. These are the same standards used to characterize and protect all waters of the Commonwealth.

#### **Public Comment #6:**

- a. There doesn't appear to be any thing [sic] in the draft permit that obligates the applicant to clean up any unauthorized discharge of raw sewage or chemicals into Lake Anna. Why not? Why should the public pay the price for clean-up.
- b. There doesn't appear to be any thing [sic] in the draft permit that obligates the applicant to clean up any unauthorized discharge of raw sewage or chemicals into Lake Anna. Why not? Why should the public pay the price for clean-up? This obligation should be added to the permit, possibly in the form of bond required from the applicant.

***Staff Response:***

Pursuant to 9VAC25-31-190, the permittee must comply with all conditions of the permit and shall report any noncompliance which may endanger health or the environment within twenty-four hours from the time the permittee becomes aware of the circumstance.

Part II.O (State Law) of the draft permit, states “nothing in this permit shall be construed to preclude the institution of any legal action under, or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any other state law or regulation or under authority preserved by Section 510 of the Clean Water Act. Except as provided in permit conditions on "bypassing" (Part II.U.), and "upset" (Part II.V.) nothing in this permit shall be construed to relieve the permittee from civil and criminal penalties for noncompliance”. In the event of an unauthorized discharge, DEQ’s water compliance and enforcement staff will work closely with the permittee. DEQ’s enforcement program acts to protect human health and the environment and to assure the integrity of the Department’s regulatory programs. DEQ uses the full range of enforcement methods available and selects the most appropriate method for each action.

Staff believes that through Part II. G, Part II.H, Part II.I, and Part II.O of the draft permit, the requirement to mitigate an unauthorized discharge is inherent and that no further clarification is required within the permit.

**Public Comment #7:**

- a. Louisa County has indicated that they are planning to extract water from Lake Anna for public use. Why doesn’t the permit require the applicant to treat the sewage effluent for discharge into a public water supply?
- b. Louisa County has indicated that they are planning to extract water from Lake Anna for public use. This requirement was identified in Louisa County’s Long Range Regional Water Supply Plan (April 2009) that was submitted to DEQ in accordance with 9 VAC 25-780.50. The Lake Anna region is designated as one of the largest growth areas in the county. The document outlines the plan for the next 42 years when the county population is projected to grow to over 65,000. Why doesn’t the permit require the applicant to treat the sewage effluent for discharge into a public water supply? It is imperative that Louisa County’s water usage requirements stated in DEQ required documents be incorporated into all related water and/or discharge permits. We request that the DEQ Sewage Processing staff coordinate with the DEQ Office of Surface and Ground Water Supply Planning to verify Louisa County Plan for using Lake Anna water that has been vented [sic] through pubic [sic] hearings and approved by the Louisa Board of Supervisors. We also request that the permit be amended to provide that the sewage effluent be treated to be acceptable for discharge into a public water supply.

***Staff Response:***

VPDES permitting staff coordinate with staff from other DEQ programs when appropriate. Louisa County has not applied for a Virginia Water Protection Permit for a water withdrawal from Lake Anna.

The Water Quality Standards include provisions for facilities that discharge to waters designated as Public Water Supplies; Lake Anna has not been designated as a Public Water Supply in the Water Quality Standards. The designation of waters as a public water supply does not in and of itself prevent the discharge from another source (industrial or municipal) into the receiving stream. Furthermore, drinking



water standards are not applicable to this discharge since this is a wastewater treatment facility and not a potable water treatment plant producing drinking water.

The draft permit was prepared to protect the Virginia Water Quality Standards (9VAC25-260 et seq.) applicable to the receiving stream, Lake Anna. These are the same standards used to characterize and protect all waters of the Commonwealth. The permit as drafted will meet the applicable regulatory standards that have been established to protect the water quality of Lake Anna and its beneficial uses.

**Public Comment #8:**

The permit assumes that the volunteer organization Lake Anna Civic Association will provide the necessary monitoring of the water quality at the outfall to make sure the applicant complies with the permit discharge requirements. What happens when the volunteers do not show up or do not have sufficient funds to test the water quality? This permit should be updated to require the applicant to frequently test at their expense and report the water quality in Lake Anna in close proximity to the discharge pipe. The state must always insure compliance to protect the public.

***Staff Response:***

Pursuant to Section 62.1-44.19:11 of the Code of Virginia (citizen water quality monitoring program), the Department of Environmental Quality shall establish a citizen water quality monitoring program to provide technical assistance and may provide grants to support citizen water quality monitoring groups. The Lake Anna Civic Association is one such citizen water quality monitoring program. Data from citizen monitoring may be used to list and delist impaired waters on the 303(d) List, for source identification for Total Maximum Daily Load (TMDL) development for waters already listed as impaired, track progress towards the restoration of waters which have an approved TMDL and may also have a TMDL implementation plan, target waters for future DEQ monitoring, and to educate land owners on the water quality impacts of land use activities. The fact sheet recognizes all Lake Anna Civic Association water quality monitoring stations within a two mile radius of the discharge location. At no time is data from citizen monitoring stations used by DEQ or the permittee to determine compliance with a permit.

Self monitoring and reporting is the cornerstone of the VPDES program. Compliance assessment is made by evaluating the monthly self monitoring reports which are required by the permit. Compliance monitoring requirements for both the 0.020 MGD and 0.099 MGD flow tiers are in accordance with the recommendations set forth in the VPDES Permit Manual and are found in Part I.A of the draft permit.

**Public Comment #9:**

The State Transmittal Checklist, plus the permit should be updated since it reflects that data is in the permit for low/critical flow conditions, but none can be found. Lake Anna has experienced 3 major droughts during the past 10 years and there is nothing in the permit to reflect updated requirements for the applicant when a drought exists.

***Staff Response:***

Pursuant to 9VAC25-260-20, mixing zones shall not be allowed for effluents discharged to wetlands, swamps, marshes, lakes or ponds. The effluent limits are established assuming worst-case, critical conditions where there is no dilution available in the receiving water and the facility discharges at full design flow. The Water Quality Standards are applied at the point of discharge and protect the public health and welfare, enhance the quality of the water and serve the purposes of the State Water Control

Law (§ 62.1-44.2 et seq. of the Code of Virginia) and the federal Clean Water Act (33 USC § 1251 et seq.).

**Public Comment #10:**

The State Transmittal Checklist also indicates there is NO potential impact to endangered species. What happens when raw sewage enters the lake due to mechanical or human, failures, [sic] earthquake or flood to all of the fishery, wildlife and clams? The permit should be updated to reflect this very real condition.

***Staff Response:***

The Virginia DGIF Fish and Wildlife Information System Database search is intended to identify threatened and endangered species within a two mile radius of the discharge location. The limits contained in the draft permit are protective of the Water Quality Standards thereby protecting the threatened and endangered species found near the discharge. The checklist confirms that the discharge is in conformance with effluent limits and will have no impact to threatened and endangered species.

A VPDES permit is issued by the board authorizing, under prescribed conditions, the potential or actual discharge of pollutants from a point source to surface waters and the use or disposal of sewage sludge. A discharge of raw or partially treated wastewater to Lake Anna is prohibited by the facility's permit and would be considered a violation of that permit. Potential impact from an unauthorized discharge is not evaluated by staff.

**Public Comment #11:**

- a. There appears to be major problems with the self monitoring aspects reflected in the permit. Due to all of the previous violations in a short time period when the applicant operated the facility, the permit should be updated to identify more frequent human inspections by DEQ personnel. If the lagoon liner leaks sewage into the ground where there are residential wells nearby, the applicant should report and take action immediately - not 60 days later.
- b. There appears to be major problems with the self monitoring aspects reflected in the permit. Due to all of the previous violations in a short time period when the applicant operated the facility, the permit should be updated to identify more frequent (a minimum of semi-annual) human inspections by DEQ personnel. If the lagoon liner leaks sewage into the ground where there are residential wells nearby, the applicant should report and take action immediately - not 60 days later.

***Staff Response:***

In accordance with the facility's approved Lagoon Liner Integrity and Groundwater Monitoring Plan, the dewatering system of each lagoon is to be sampled on a semi-annual basis for *E. coli* with the results submitted to DEQ. Non-compliance with the Lagoon Liner Integrity and Groundwater Monitoring Plan is deemed a violation of the permit.

Should the integrity of the lagoon liners be compromised, the permittee shall be required to comply with the requirements set forth in the draft permit (Part I.C.15 - Lagoon Liner Integrity and Groundwater Monitoring Plan). Additionally, the draft permit (Part II.I – Reports of Noncompliance) states “The permittee shall report any noncompliance which may adversely affect state waters or may endanger public health”. This section further stipulates that an oral report shall be provided within 24 hours from the time the permittee becomes aware of the circumstances and that a written report shall be submitted within 5

days. In accordance with the draft permit (Part I.C.15), if monitoring results indicate contaminated ground water due to leakage from the facility's lagoons, the permittee shall submit a corrective action plan within 60 days of being notified by the regional office.

Self monitoring and reporting is the cornerstone of the VPDES program. In accordance with the VPDES Compliance Monitoring Strategy, small municipal facilities which discharge more than 0.001 MGD but less than 0.040 MGD require a technical inspection once every five years. DEQ also utilizes a risk based protocol comprised of elements designed to identify facilities that pose the greatest potential for environmental impact. These facilities are then identified as needing increased or decreased inspection scrutiny beyond what is established in the Compliance Monitoring Strategy. The compliance history of the facility is one of the elements considered in the risk-based approach. Given that many factors are involved in determining compliance inspection frequency, it is not appropriate for the VPDES permit to prescribe a specific inspection frequency.

**Public Comment #12:**

- a. Has Dominion Resources (owner of the Lake Anna shore land) previously granted a permit/license agreement to the applicant for putting the sewage effluent pipe across their land into Lake Anna? If so, what are the conditions and time period of the permit/agreement so it can be tied to this permit since the applicant does not control all parts of the discharge system? Please insert these conditions in this permit. If not, Dominion's written approval should be obtained by the applicant and then Dominion's conditions included in the permit.
- b. Has Dominion Resources (owner of the Lake Anna shore land) previously granted a permit/license agreement to the applicant for putting the sewage effluent pipe across their land into Lake Anna? If so, what are the conditions and time period of the permit/agreement so it can be tied to this permit since the applicant does not control all parts of the discharge system? Please insert these conditions in this permit, including time limit of the Dominion permit and renewal conditions. If not, Dominion's written approval should be obtained by the applicant and then all of Dominion's conditions included in the permit.

Because Dominion has de facto taken possession of the effluent when the effluent enters and crosses Dominion owned land and because Dominion in fact owns the bottom of the Lake and thus the discharge into the Lake is a discharge by Dominion. It is requested that Dominion Resources be made a party to the application and must appear as an applicant.

***Staff Response:***

9VAC25-31-10 defines owner as ".....any public or private institution, corporation, association, firm or company organized or existing under the laws of this or any other state or country, or any officer or agency of the United States, or any person or group of persons acting individually or as a group that owns, operates, charters, rents, or otherwise exercises control over or is responsible for any actual or potential discharge of sewage, industrial wastes, or other wastes to state waters, or any facility or operation that has the capability to alter the physical, chemical, or biological properties of state waters in contravention of § 62.1-44.5 of the Code of Virginia". Dominion Resources does not own or operate the Lake Anna Environmental Services STP and has no control or responsibility for the discharge. As such, Dominion Resources cannot be designated as a co-permittee based only on their ownership of the land that the effluent pipe crosses.

Additionally, Dominion Resources, Incorporated did not voice any concerns or objections on the draft permit during the public comment period which ended on November 14, 2011.

**Public Comment #13:**

This permit should be coordinated with Louisa, Spotsylvania and Orange Counties by DEQ since they all border Lake Anna where this sewage effluent will be discharged into. If the DEQ regulations do not require it, then DEQ should be proactive and as a responsible government agency take it upon itself to insure that all counties are coordinated with. Why is the permittee responsible to comply with local standards, with no requirement for the state or commonwealth to do likewise? More proactive coordination is required especially when the sewage effluent will be discharged into a Lake that has 3 million annual user recreation days.

***Staff Response:***

Section 62.1-44.15:4 of the Code of Virginia requires DEQ to notify each locality and riparian property owner to a distance one half mile downstream on nontidal waters when a permit application is received for the issuance of a new or modified permit or a permit reissuance where an expansion is planned.

By letter dated April 27, 2011, DEQ notified the Louisa County and Spotsylvania County Administrators and the Louisa County and Spotsylvania County Board of Supervisors of the proposed expansion associated with the reissuance. Riparian property owners identified one half mile upstream and one half mile downstream of the discharge location on both the Louisa County and Spotsylvania County shores of Lake Anna were also notified of the proposed expansion by letter dated April 27, 2011.

DEQ staff has taken additional measures not required by regulation. Prior to the public notice of the draft VPDES permit, DEQ hosted two meetings on September 9, 2011, at the Salem Church Branch of the Central Rappahannock Regional Library. The first was held with the Lake Anna Civic Association (LACA), representatives from Lake Anna Environmental Services (LAES) and DEQ. The second was held with the Friends of Lake Anna (FOLA), representatives from LAES, the Chairman of the Louisa County Board of Supervisors, and DEQ. Both meetings allowed representatives from the two local organizations equal opportunity to discuss their comments and concerns, and to ask questions of DEQ and the permittee. DEQ also attended the October 3, 2011, meeting of the Louisa County Board of Supervisors to provide information on the draft permit and respond to questions and concerns of the Board members. . In response to this permit action, DEQ has also attended meetings on November 9, 2011, and November 30, 2011, with LACA, FOLA, and members of the Louisa County Board of Supervisors to discuss the VPDES process, wastewater treatment concerns in general, and to plan for a public education forum on wastewater treatment options for the Lake Anna growth area.

Water supply, zoning and land use plans of localities are not within the scope of the VPDES regulations. It should be noted that VPDES permits do not relieve the permittee of responsibility to comply with all applicable local ordinances and requirements. Specifically, 9VAC25-31-190 states that permits do not convey any property rights of any sort, or exclusive privilege.

**Public Comment #14:**

DEQ has issued sixteen warning letters (ten of which were received under the previous ownership) for violations of the sewage processing plant). Six additional violations were reported since Dec 2010. Some related to E. coli, others related to failure to monitor lagoon liner integrity and also the facility owner simply failed to renew his discharge permit. How can DEQ issue a permit to someone that had this many violations in this short a period of time? It should be standard practice for DEQ to notify surrounding localities and the public when permit violations occur? A responsible government agency should be proactive with protecting the public.

***Staff Response:***

The facility has received sixteen warning letters (ten of which were received under the previous ownership) between September 2000 and October 12, 2011, for both effluent limit violations and administrative items. Given that the worst-case, critical conditions underlying development of permit limits rarely occurs, an exceedance of a permit effluent limit does not necessarily translate into an exceedance of the water quality standards. There is no evidence to suggest the effluent limit violations resulted in a water quality issue with Lake Anna. Please see the staff response to Public Comment #3 for additional information on the compliance history of the facility.

It is not standard practice for DEQ to notify localities or the public of permit violations. However, if there were an event which could significantly impact human health, DEQ would consult with the Virginia Department of Health and local officials as necessary.

**Public Comment #15:**

It is our understanding is that Lake Anna Environmental Services was (prior to permit expiration) discharging less then [sic] 1,000 gallons per day. Why the need to expand to 99,000 gallons per day? Has this growth been approved by Louisa County? If not, why not? Why is a statement of need not required by the VPDES program and then coordinated with the adjoining counties that may be affected? Are there no limits on what an applicant can request? If so, what are they? DEQ should be proactive in changing any regulation/statue to insure a statement of need is required for any permit processed, otherwise DEQ and the public are wasting much time in reviewing permit applications. Why do parts of DEQ require counties to do long range planning and then other parts do not coordinate with the counties when processing VPDES and other permits? This is not a wise use of spending the public's tax dollars.

***Staff Response:***

A statement of need is not required by the VPDES regulation. An applicant may request an expansion without limitation of flow. As explained by the permittee during the September 9, 2011 meetings with the Lake Anna Civic Association and the Friends of Lake Anna, the request for the expansion has been made in anticipation of future need due to continued growth in the area. Louisa County approval of the proposed expansion is not required under statute or regulation.

Water supply, land use, and development plans of Louisa County are not within the scope of the VPDES regulations. It should be noted that VPDES permits do not relieve the permittee of responsibility to comply with all applicable local ordinances and requirements. Specifically, 9VAC25-31-190 states that permits do not convey any property rights of any sort, or exclusive privilege.

The affected localities were notified in accordance with Section 62.1-44.15:4 of the Code of Virginia. Please see the staff response to Public Comment #13 for additional information.

**Public Comment #16:**

How will this permit affect the TMDL Chesapeake Bay Watershed allocation limit for the local Louisa/Spotsylvania/Orange County areas? In Dec 2010, the U.S. Environmental Protection Agency established the Chesapeake Bay Total Maximum Daily Load (TMDL) to restore the Chesapeake watershed (64,000 square miles) to ensure compliance with the Clean Water Act so that all waters are “fishable” and “swimmable”. It requires states to establish “wasteload allocations” for “point sources” like sewage treatment plants and “load allocations” for “non point sources”. Have all of the possible affected County officials been coordinated with and have they approved this expansion from .020 MGD expansion to .099 MGD allocation which may prevent them from later creating their own regional sewage processing systems or other small discharge systems or alternative septic tank processing systems?. It is requested that DEQ be proactive (whether or not it is in the statute or regulation) in coordinating with their local partners in government so there are no future surprises on anyone’s part and appropriate county long range water/sewer plans can be updated accordingly and DEQ’s current action in granting permits do not preempt the counties from allocating their TMDL allocations.

***Staff Response:***

The draft permit has been prepared consistent with the Chesapeake Bay Total Maximum Daily Load (TMDL) and will not affect the ability of other localities within the Louisa / Spotsylvania / Orange County areas to expand or provide new wastewater treatment capabilities.

The General Virginia Pollutant Discharge Elimination System (VPDES) Watershed Permit Regulation for Total Nitrogen and Total Phosphorus governs the nitrogen and phosphorus loadings from facilities and specifies facilities that must register under the general permit. Nutrient loadings for those facilities registered under the general permit as well as compliance schedules and other permit requirements, are authorized, monitored, limited, and otherwise regulated under the general permit.

Sewage treatment works authorized to discharge 100,000 gallons or more per day (or an equivalent load from industrial processes), directly into tidal waters, or 500,000 gallons or more per day (or an equivalent load from industrial processes) directly into non-tidal waters were identified during the development of the Chesapeake Bay Tributary Strategy. These facilities are considered significant dischargers and are listed in the Water Quality Management Plan (WQMP) regulation and have been assigned waste load allocations for nitrogen and phosphorus, regulated as annual mass loading limits in the general permit.

Sewage treatment works that, as a result of expansion, are proposed to discharge 40,000 gallons or more per day (or an equivalent load from industrial processes) directly into tidal or nontidal waters are required to register for coverage under the general permit at the time of an application with the Department for an individual VPDES permit, should that permit authorize new discharge or expansion. These facilities will not receive a waste load allocation for the increased (or new) discharges and will be subject to an offset or technology-based requirement. Expanding facilities receive an annual load limit based on the facility design flow and nutrient removal technology that existed as of July 1, 2005.

New sewage treatment works that are permitted to discharge greater than 1,000 gallons per day and less than 40,000 gallons per day that have not commenced the discharge of pollutants prior to January 1, 2011, are required to register for coverage under the general permit prior to commencing a discharge. These

facilities will not receive a waste load allocation for the new discharges and will be required to offset all Total Nitrogen and Total Phosphorus loads.

The Lake Anna Environmental Services STP is an existing facility that is a non-significant discharger (less than 0.5 MGD above the fall line) which does not have a wasteload allocation listed in the Water Quality Management Plan regulation (9VAC25-720). Total Nitrogen and Total Phosphorus annual average effluent concentration limits at the 0.099 MGD flow tier were derived using a permitted design capacity based on the existing 0.020 MGD flow. Please see Section 28 of the Draft Fact Sheet found in Appendix C for a detailed description of the derivation of the nutrient concentration limits.

**Public Comment #17:**

The system design should have an automatic dual power backup in case of lost power and the worst case scenario (earthquake, flood, etc.). If not what actions are taken to prevent the dumping of raw sewage into the Lake? It is requested that more redundancy should be built into both the collection and sewage processing system.

***Staff Response:***

The simple lagoon design of the existing wastewater treatment plant (0.020 MGD flow tier) provides for extensive storage capacity and does necessitate redundancy in power supply to address reliability concerns.

The design of the upgraded wastewater treatment plant (0.099 MGD flow tier) must be in accordance with the Sewage Collection and Treatment Regulations (9VAC25-790 et seq.) and meet the requirements of Reliability Class I as prescribed by the regulations. This reliability classification addresses the ability of the treatment works to maintain operability without failure or interruption of service and accounts for power failures, flooding, equipment failure and maintenance shut-down.

A pump station reliability special condition was added with this reissuance. Within 180 days of the effective date of the permit, the permittee is to submit to the Northern Regional Office a plan and schedule to upgrade the two existing pump stations to Reliability Class I. Given the proximity of the Lake Anna Environmental Services STP to Lake Anna, any new pump station shall require Reliability Class I.

**Public Comment #18:**

When processing a discharge application, DEQ should coordinate with the county in which is plant is located to find out if there are any local building codes and/or ordinances that must also be complied with. A DEQ or SWCB permit should never be issued that is not coordinated in advance. The public is paying taxes to both entities and consequently both entities should work together to protect the publics, health safety and welfare. It appears that this is not currently happening.

***Staff Response:***

Section 62.1-44.15:4 of the Code of Virginia requires DEQ to notify each locality and riparian property owner to a distance one half mile downstream on nontidal waters when a permit application is received for the issuance of a new or modified permit or a permit reissuance where an expansion is planned.

By letter dated April 27, 2011, DEQ notified the Louisa County and Spotsylvania County Administrators and the Louisa County and Spotsylvania County Board of Supervisors of the proposed expansion associated with the reissuance. Riparian property owners identified one half mile upstream and one half mile downstream of the discharge location on both the Louisa County and Spotsylvania County shores of Lake Anna were also notified of the proposed expansion by letter dated April 27, 2011.

VPDES permits do not relieve the permittee of responsibility to comply with all applicable local ordinances and requirements. Specifically, 9VAC25-31-190 states that permits do not convey any property rights of any sort, or exclusive privilege.

**Public Comment #19:**

When (not if) the raw sewage or chemicals enter the lake, we could have a major problem after the residents and public finds out. Homes values could decrease dramatically, the public could stop coming to the lake, businesses would suffer, and the surrounding counties (Louisa, Spotsylvania and Orange) tax base would suffer. Currently the lake residences tax assessments account for about 29% of Louisa County's income. The lake business account for about another 10% of Louisa's income. So Louisa County could suffer a major (up to 39%) economic blow on income. Who wants to swim or have their children or grandchildren recreate in raw sewage that enters the lake(due to plant processing mechanical, human, earthquake or flood failures ) or chemicals that are not removed as part of the processing and that over 90% continuously re-circulates and is heated and discharged at over 104 degrees in publicre4creation [sic] areas?

For all of these reasons, we request that the permit requires the applicant post a \$5 million performance bond to compensate the resident, businesses and surrounding counties for economic damages when any chemicals (above the legal limit) or raw sewage from their processing plant or collection systems for any reason.

If DEQ does not currently have the authority under statute or regulations to require a bond, then DEQ should initiate action through appropriate channels for this to protect the public.

***Staff Response:***

DEQ does not have the authority under statute or regulations to require a bond such as this. Pursuant to Section 62.1-44.18:3 of the Code of Virginia and 9VAC25-650-1, owners and operators of privately owned treatment works with a design flow greater than 0.005 MGD, but less than 0.040 MGD and treating sewage from private residences are required to submit a closure plan and maintain adequate financial assurance in the event the facility ceases operations. This requirement is found within Part I.C of the draft permit.

Additionally, Section 62.1-44.18:3 of the Code of Virginia states "Any person who ceases operations and who knowingly and willfully fails to implement a closure plan or to provide adequate funds for implementation of such plan shall, if such failure results in a significant harm or an imminent and substantial threat of significant harm to human health or the environment, be liable to the Commonwealth and any political subdivision thereof for the costs incurred in abating, controlling, preventing, removing, or containing such harm or threat".

The draft permit was prepared to protect the Virginia Water Quality Standards (9VAC25-260 et seq.) applicable to the receiving stream, Lake Anna. These are the same standards used to characterize and



protect all waters of the Commonwealth. The permit as drafted will meet the applicable regulatory standards that have been established to protect the water quality of Lake Anna and its beneficial uses.

**Public Comment #20:**

What will be the cumulative impact of the sewage effluent and chemical over time in Lake Anna, since there is little (during non-drought periods) or no natural water flow (during droughts)? Over 90% of the lake water re-circulates between the power plant, through the cooling lagoons and at dike 3 it returns upstream to the power plant for another re-circulation cycle. There is a major concern about various chemicals/drugs that are flushed down toilets and are not removed from the sewage effluent during normal processing. What is the impact to public health from exposure to these drugs and all the nutrients over a period of time? DEQ should be coordinating with the Dept. of Health to insure the permit holder is removing all drugs/chemicals from the sewage effluent prior to discharge. If not, then DEQ should be proactive in changing the regulations/statutes so drugs/nutrients are removed prior to discharge into the lake.

***Staff Response:***

The draft permit was prepared to protect the Virginia Water Quality Standards (9VAC25-260 et seq.) applicable to the receiving stream, Lake Anna. These are the same standards used to characterize and protect all waters of the Commonwealth. The permit as drafted will meet the applicable regulatory standards that have been established to protect the water quality of Lake Anna and its beneficial uses. Effluent in conformance with its permit will have no measureable impact on water quality.

DEQ, rather than the Virginia Department of Health (VDH), has regulatory authority over wastewater treatment systems such as the Lake Anna Environmental Services STP. If there were an event which could significantly impact human health, DEQ would consult with VDH and local officials as necessary.

The presence of pharmaceuticals in treated effluent is an emerging issue. Studies have shown that our nation's waters contain a broad range of chemicals and compounds that can cause environmental harm. As analytical test procedures continue to measure compounds in smaller and smaller concentrations, additional compounds are being identified in our waters. These products include both human and veterinary drugs, antibiotics, fragrances and cosmetics, soaps, fire retardants, pesticides and plasticizers (compounds which are used in a wide array of plastic products ranging from plastic bottles and eye glasses to sport safety equipment). Most all of the products and compounds that have been developed and used by people will break down into their basic constituents (parts) and end up in the air, water or soil at some point. The term microconstituent is now being used to describe natural or manmade compounds that are detected in the environment with a potential effect on organism development and human health.

DEQ is keeping informed of the latest developments in the field and is consulting with EPA on this issue. EPA is the lead federal agency on development of a national plan to identify human and environmental health effects from endocrine disrupting compounds and other microconstituents. EPA plans to work with environmental organizations, public utilities (drinking water and sanitary), state health and environmental agencies, and the agricultural community in the development of this national plan. EPA has identified four focus areas for the future: strengthening science, improving public communication about risks, building collaborative partnerships with pharmaceutical companies, and considering regulatory tools to address the issues. Until there is more information about the impact of these microconstituents to human health and the environment there is no basis for additional requirements in VPDES permits. As this program develops over the years DEQ will continue to look at our requirements to improve the protection of the environment.

The effectiveness of a wastewater treatment plant in treating and removing microconstituents and nutrients is dependent upon available technology and not regulation. Regulation cannot require a level of treatment that existing technology cannot support.

**Public Comment #21:**

Ambiguous/undefined/incomplete terms in draft permit documents – Quantification Levels

“The QL is defined as the lowest concentration used to calibrate a measure system in accordance with the procedures published for the method”. Define who and date of the publication.

***Staff Response:***

All monitoring required by the permit shall be conducted according to procedures approved under Title 40 Code of Federal Regulations Part 136 or alternative methods approved by the U.S. Environmental Protection Agency, unless other procedures have been specified in the permit. This is specified in Part II.A of the draft permit

The above language pertaining to quantification levels is standard language that appears in all individual VPDES permits. Staff believes that the current language in Part I.B.2.b of the draft permit is sufficient and no changes to the draft permit are warranted.

**Public Comment #22:**

Ambiguous/undefined/incomplete terms in draft permit documents – Quantification Levels

“It is the responsibility of the permittee to ensure that PROPER quality assurance/quality control protocols,” etc... This permit should be changed to define exactly what PROPER means so the public is definitely aware and can monitor if it so desires. Possibly this language has not resulted in confusion with the permittees or their commercial laboratories in the past, but now is the time to clarify.

***Staff Response:***

All monitoring required by the permit shall be conducted according to procedures approved under Title 40 Code of Federal Regulations Part 136 or alternative methods approved by the U.S. Environmental Protection Agency, unless other procedures have been specified in the permit. This is specified in Part II.A of the draft permit

The above language pertaining to QA/QC information is standard language that appears in all individual VPDES permits. Staff believes that the current language in Part I.B.2.c of the draft permit is sufficient and no changes to the draft permit are warranted.

**Public Comment #23:**

Ambiguous/undefined/incomplete terms in draft permit documents – Quantification Levels

“The permittee shall provide ADEQUATE notice to the Department, etc”. The permit should be changed to define an exact time period (i.e. within 10 days).

***Staff Response:***

Staff is uncertain as to the basis for this comment. Part I.B.2 of the draft permit, which pertains to quantification levels, does not contain language about providing adequate notice to the Department.

**Public Comment #24:**

Ambiguous/undefined/incomplete terms in draft permit documents – Indirect Dischargers. “The permittee shall provide adequate notice “. Define exact time period for adequate

***Staff Response:***

Per 9VAC25-31-10, an indirect discharger means a nondomestic discharger introducing pollutants to a wastewater treatment plant. These indirect discharges are covered under the general pretreatment regulations found in 9VAC25-31-730 through 9VAC25-31-900.

A wastewater treatment plant may not immediately know that there has been a change in the volume and/or character of the pollutants introduced to the plant until there is a problem with treatability. Adequate can be interpreted to mean “as soon as possible” or “as soon as reasonable”. The pretreatment regulations describe the general prohibitions (9VAC25-31-770) in terms of what may not be introduced to a wastewater treatment plant. If there are known industries that contribute to the wastewater treatment plant, then those industries may be subject to additional limitations under the pretreatment regulations.

The permittee is to comply with the permit conditions and effluent limitations at all times regardless of how much notice and/or information was provided in accordance with the permit condition and 9 VAC 25-31-200.

**Public Comment #25:**

Ambiguous/undefined/incomplete terms in draft permit documents – Indirect Dischargers

“Any substantial change in volume or character” Define substantial (5%, 10% or what)? Define character (i.e. is it more nutrients? more drugs? more chemicals? How much more, etc.?).

***Staff Response:***

Substantial refers to an effect versus an amount of a given toxicant. For example, substantial could mean additional volume that is more than can be optimally treated, or it could be a small percent increase in some pollutant, or even the addition of a pollutant that was previously not there and cannot be treated. If there was an effect on the ability of the wastewater treatment plant to treat the waste, it had a substantial impact.

The characteristic of concern could be anything. A successful wastewater treatment plant operates by balancing what comes in as influent, with the ability to treat it physically, biologically and chemically. Anything that upsets the balance, including storm water, can affect the ability of the wastewater treatment plant operators to make adjustments to compensate for the imbalance. Because the Lake Anna Environmental Services STP has no industrial dischargers within the collection system, a substantial change in volume or character of pollutants being introduced into the treatment works would not be expected.

**Public Comment #26:**

“The permittee will maintain an accurate, approved operation and maintenance manual for treatment works.” Define who and in what time period they must approve the manual and how it must be updated. Also define how it is coordinated with Louisa County and they are made aware of the results to insure it complies with their requirement. It is requested that DEQ be proactive in coordinating with their local government partners to insure that the left hand knows what the right hand is doing.

***Staff Response:***

Operation and Maintenance Manuals must be developed in accordance with the Sewage Collection and Treatment Regulations (9VAC25-790-950) and VPDES Permit Regulation, 9VAC25-31-190.E and are approved by DEQ. Part I.C.3 of the draft permit states that “The permittee shall review the existing Operations and Manual and notify the DEQ Northern Regional Office in writing whether it is still accurate and complete within ninety days of the effective date of the permit”. Concurrence from Louisa County is not required under statute or regulation.

**Public Comment #27:**

The permit fact sheet and other locations in the permit should be updated to reflect that the discharging location is in Lake Anna (a 13,000 acre lake that is utilized by over 3 million annual user days in 2010 for over 25 different types of recreation) to demonstrate that this sewage effluent is not being discharged into a free flowing stream that has little other use. It is also requested that you add to the fact sheet that this discharge is adjacent to the swimming areas for the children of the Lake Anna condominiums and the swimming areas for children of the Windwood Coves subdivision.

***Staff Response:***

The fact sheet is explicit in that the discharge from the Lake Anna Environmental Services STP is to Lake Anna. Furthermore, the fact sheet states there are no critical flows and that no mixing zones are allowed. It is staff's best professional judgement that no further clarification is required within the fact sheet.

The draft permit was prepared to protect the Virginia Water Quality Standards (9VAC25-260 et seq.) applicable to the receiving stream, Lake Anna. These are the same standards used to characterize and protect all waters of the Commonwealth. The permit as drafted will meet the applicable regulatory standards that have been established to protect the water quality of Lake Anna and its beneficial uses, including recreation. It is staff's best professional judgement that no further clarification is required within the fact sheet.

**Public Comment #28:**

Part 1 C 5. Financial Assurance and Disclosure. Failure to maintain adequate financial assurance in accordance with the 9VAC25-650 shall be a basis for termination of this permit. If the permit is terminated, then define who has to take over the permit and provide the sewage treatment services, so it is not a burden on the Louisa County Taxpayers. If concurrence from Louisa County is not required under the current statute or regulation, then it is imperative that DEQ (1) be responsible and proactive to protect the taxpayers of Louisa County and the Commonwealth and reach out to Louisa County to get their approval for the financial obligation that they might incur and also (2) do what ever [sic] is necessary to get the statute and/or regulations changed. Define who and when the public will be notified. We expect

our public officials to do not only what is exactly required in statute and regulations, but to be proactive and do the right thing to protect the safety, health and welfare of the public.

***Staff Response:***

Pursuant to Section 62.1-44.18:3 of the Code of Virginia and 9VAC25-650-1, owners and operators of privately owned treatment works with a design flow greater than 0.005 MGD, but less than 0.040 MGD and treating sewage from private residences are required to submit a closure plan and maintain adequate financial assurance in the event the facility ceases operations. These requirements are found within Part I.C of the draft permit. Concurrence from Louisa County and/or the Louisa County Water Authority is not required under statute or regulation.

Additionally, Section 62.1-44.18:3 of the Code of Virginia states that “Any person who ceases operations and who knowingly and willfully fails to implement a closure plan or to provide adequate funds for implementation of such plan shall, if such failure results in a significant harm or an imminent and substantial threat of significant harm to human health or the environment, be liable to the Commonwealth and any political subdivision thereof for the costs incurred in abating, controlling, preventing, removing, or containing such harm or threat”.

The permittee shall provide continuous coverage to implement the approved closure plan until released from financial assurance requirements by the State Water Control Board. If a transfer of ownership or operational control of this facility occurs, the permittee shall comply with the requirements of 9VAC25-650 until the new owner or operator has demonstrated compliance with the requirements of 9VAC25-650. Failure to maintain adequate financial assurance in accordance with 9VAC25-650 shall be a basis for termination of this VPDES permit.

The facility’s closure plan was approved by DEQ on October 4, 2011, and provides for Inboden Environmental Services, Incorporated to operate and maintain the Lake Anna Environmental Services STP. During the term of this VPDES permit, the permittee shall revise the closure plan implementation cost estimate concurrently with any revision made to the closure plan which increases the closure plan cost. At a minimum, the permittee shall annually adjust the closure plan implementation cost estimate in accordance with 9VAC25-650 within 60 days prior to the anniversary date of the establishment of the approved financial assurance mechanism.

**Public Comment #29:**

We request, the permit shall define that the applicant must post a separate bond that exceeds 2 years of annual operational and maintenance costs, plus transfer of ownership costs and any associated legal fees associated with the termination of this permit so this permit does not become a burden for the Louisa County taxpayers.

Note that this bond is in addition to the request to post a \$5 million performance bond to compensate the resident, businesses and surrounding counties for economic damages when any chemicals (above the legal limit) or raw sewage from their processing plant or collection systems for any reason.

***Staff Response:***

DEQ does not have the authority under statute or regulations to require a bond such as this. Pursuant to Section 62.1-44.18:3 of the Code of Virginia and 9VAC25-650-1, owners and operators of privately owned treatment works with a design flow greater than 0.005 MGD, but less than 0.040 MGD and treating sewage from private residences are required to submit a closure plan and maintain adequate financial assurance in the event the facility ceases operations. This requirement is found within Part I.C of the draft permit.

Additionally, Section 62.1-44.18:3 of the Code of Virginia states that “any person who ceases operations and who knowingly and willfully fails to implement a closure plan or to provide adequate funds for implementation of such plan shall, if such failure results in a significant harm or an imminent and substantial threat of significant harm to human health or the environment, be liable to the Commonwealth and any political subdivision thereof for the costs incurred in abating, controlling, preventing, removing, or containing such harm or threat”.

The draft permit was prepared to protect the Virginia Water Quality Standards (9VAC25-260 et seq.) applicable to the receiving stream, Lake Anna. These are the same standards used to characterize and protect all waters of the Commonwealth. The permit as drafted will meet the applicable regulatory standards that have been established to protect the water quality of Lake Anna and its beneficial uses.

**Public Comment #30:**

Part 1 C 2nd Para 6. Licensed Operator Requirement. The permittee shall notify the Department in writing whenever he is not complying, or has grounds for anticipating he will not comply. When was the last time that persons not obeying the law notified the police when they broke the law??? How many people might anticipate they will break the law and then they notify the police in advance? We must work together to tighten these requirements in the permit to ensure that Lake Anna is protected. We request that this requirement be enhanced to be realistic and enforceable with quantifiable terms. At a minimum, the facility should have an annual on-site inspection by DEQ, since its failure can affect the recreational activities for over 3 million annual user days (see attached 2010 Lake Anna, Virginia User Recreation Days Statistical Summary ” for the various types and user numbers of recreation at Lake Anna).

It appears that in the past the DEQ staff monitored the facility’s compliance in accordance with standard agency practices and compliance problems were addressed through informal enforcement actions. When a facility has demonstrated that they had 6 violations in a 6 month time period and then let their permit expire, this permit and DEQ practices must be enhanced to quantifiable terms (for example; (1) Standard practices are defined as: (a).... (b).... Etc. (2) If a permittee has more then [sic] 3 violations in a 5 month time period, then DEQ will conduct an on-site visit to review. Also please define in the permit exactly what the penalties are for non-compliance.

***Staff Response:***

The language in the draft permit pertaining to the licensed operator requirements is in accordance with the VPDES regulation at 9VAC25-31-200.

The facility has received Warning Letters for both effluent limit violations and administrative items as explained in staff’s response to Public Comment #3. However, an exceedance of a permit effluent limit

does not necessarily translate into an exceedance of the Water Quality Standards, as was the case with the Warning Letters issued for effluent limit violations at the Lake Anna Environmental Services STP.

Self monitoring and reporting is the cornerstone of the VPDES program. In accordance with the VPDES Compliance Monitoring Strategy, small municipal facilities which discharge more than 0.001 MGD but less than 0.040 MGD require a technical inspection once every five years. DEQ also utilizes a risk based protocol comprised of elements designed to identify facilities that pose the greatest potential for environmental impact. These facilities are then identified as needing increased or decreased inspection scrutiny beyond what is established in the Compliance Monitoring Strategy. The compliance history of the facility is one of the elements considered in the risk-based approach. Given that many factors are involved in determining compliance inspection frequency, it is not appropriate for the VPDES permit to prescribe a specific inspection frequency.

DEQ uses a full range of enforcement methods and selects the most appropriate enforcement method for each action. Appropriate enforcement means that the enforcement action addresses each violation and that the enforcement response is proportional to the violation. All environmental violations are subject to enforcement; however, DEQ classifies violations based on their seriousness (i.e., duration, magnitude, culpability) and their impact or threat of impact on human health, the environment, and the regulatory program. As such, it is not appropriate for staff to define within a VPDES specific penalties for noncompliance.

#### **Public Comment #31:**

Part 1. C 11. Treatment Works Closure Plan. If the permittee plans an expansion or upgrade to replace the existing treatment works, or if the facility is permanently closed, the permittee shall submit to the DEQ-NRO a closure plan. There is no mention of coordination with the Louisa County Water and Sewer authority or County Officials. Why not? If the plant is closed or expanded, then it could very easily be in violation of the County comprehensive plans or local ordinance and also become a burden on Louisa County taxpayers.

DEQ may currently not be required by statute or regulation to coordinate with Louisa County. It is requested that DEQ should be proactive in changing these statutes /regulations to protect the health, safety and welfare of the public taxpayers. In the meantime, DEQ should do the right thing and coordinate with Louisa County any closure plan so Louisa can be prepared with contingency plans and incorporate this into their long range plans for a possible regional water/sewage plant.

#### ***Staff Response:***

Section 62.1-44.18:3 of the Code of Virginia states that “Any person who ceases operations and who knowingly and willfully fails to implement a closure plan or to provide adequate funds for implementation of such plan shall, if such failure results in a significant harm or an imminent and substantial threat of significant harm to human health or the environment, be liable to the Commonwealth and any political subdivision thereof for the costs incurred in abating, controlling, preventing, removing, or containing such harm or threat”.

Concurrence from Louisa County and/or the Louisa County Water Authority is not required under statute or regulation. Water supply, zoning and land use plans of localities are not within the scope of the VPDES regulations. It should be noted that VPDES permits do not relieve the permittee of responsibility to comply with all applicable local ordinances and requirements. Specifically, 9VAC25-31-190 states that permits do not convey any property rights of any sort, or exclusive privilege.

**Public Comment #32:**

Part II. B. Records. The permit should be updated to reflect that all records of monitoring, operation and maintenance should be in an electronic form on a website maintained by the applicant/permittee that can be viewed by the public and updated a minimum of once monthly.

***Staff Response:***

DEQ has no authority under statute or regulation to require the permittee to maintain a website so that the public can view records of monitoring and operation. Under the Freedom of Information Act the public may review any documents submitted to DEQ by the permittee.

**Public Comment #33:**

Lagoon Liner Integrity and Groundwater Monitoring Plan. If monitoring results indicate contaminated ground water due to leakage from the facility's lagoons, the permittee shall submit a corrective action plan within 60 days of being notified by the regional office. The permit should be updated to reflect that there are many persons living within close proximity of this location, all which currently rely on well water. Any seepage from the sewage lagoons must be reported through local radio stations and newspapers immediately, plus coordinated with Louisa county officials to protect the health, safety and welfare of those persons, particularly all persons living within a 1 mile radius of the treatment plant.

The corrective action plan should be prepared in advance as a "contingency correction action plan" that is coordinated and approved by both DEQ and Louisa County so it can immediately be activated when/if needed similar to any other contingency plan. If DEQ's regulations/statutes do not currently provide for this preplanning then DEQ should be proactive in changing them. The plan could be altered to fit the specific condition or situation. This would allow corrective action to be taken immediately (not 60 + days later). The contingency plan should be updated and coordinated with Louisa County and DEQ a minimum of each 5 years to reflect then [sic] current conditions.

***Staff Response:***

If there were an event which could significantly impact human health, DEQ would consult with the Virginia Department of Health and local officials as necessary.

Corrective action plans are strategies for correcting or eliminating a nonconformance that has occurred. To ensure that corrective actions are effective, the systematic investigation of the root causes of failure is pivotal. As such, corrective action plans cannot be developed in advance of a particular noncompliance event. In accordance with 9VAC25-31-190, the permittee must comply with all conditions of the permit and shall report any noncompliance which may endanger health or the environment within twenty-four hours from the time the permittee becomes aware of the circumstance.

The draft permit requires a revision to the Lagoon Liner Integrity and Groundwater Monitoring Plan originally approved on April 9, 2007. DEQ staff will work with representatives from Lake Anna Environmental Services STP to ensure the revised Lagoon Liner Integrity and Groundwater Monitoring Plan contains initial notification and basic preliminary action procedures should there be a problem with the integrity of the treatment system pond liners.



**Public Comment #34:**

There should be a requirement in the permit to require a reduction in the discharge amounts during prolonged periods (greater then [sic] 5 months) of drought since the current limited flow in the lake at the discharge location will become non-existent. For the purpose of permits relating to Lake Anna drought conditions, a drought is defined in the Lake Level contingency Plan as when the Main Reservoir Lake level is below 248 Mean Sea Level (MSL) as is measured by Dominion at the dam for the lake.

***Staff Response:***

It is unlikely that at 248' above mean sea level there would be no flow in Lake Anna. In accordance with 9VAC25-260-20, mixing zones shall not be allowed for effluents discharged to wetlands, swamps, marshes, lakes or ponds. The effluent limits are established assuming worst-case, critical conditions where there is no dilution available in the receiving water and the facility discharges at full design flow. The Water Quality Standards are applied at the point of discharge and protect the public health and welfare, enhance the quality of the water and serve the purposes of the State Water Control Law (§ 62.1-44.2 et seq. of the Code of Virginia and the federal Clean Water Act (33 USC § 1251 et seq.).

**Public Comment #35:**

The proposed permit will allow the discharge amount to increase from 0.020 MGD to 0.099 MGD but there is no proposed change to the discharge location, either in depth or distance from shore. The discharge of possibly five (5) times the amount to the same location appears to be irresponsible. This permit should require a relocation of discharge point farther from shore commensurate with the increase of effluent. This is necessary since (1) Lake Anna is currently listed on the current 303(d) list and the fish consumption use is categorized as "IMPAIRED" by the Va. Dept. of Health; (2) the major increase (greater then [sic] 80%) of boating slips approved in the immediate area of the RT. 208 bridge where an [sic] concentrated number of the public will swim and recreate.

***Staff Response:***

There is no regulatory requirement to mandate the location of a discharge. The draft permit was prepared to protect the Virginia Water Quality Standards (9VAC25-260 et seq.) applicable to the receiving stream, Lake Anna. These are the same standards used to characterize and protect all waters of the Commonwealth. The permit as drafted will meet the applicable regulatory standards that have been established to protect the water quality of Lake Anna and its beneficial uses.

**Public Comment #36:**

The 3<sup>rd</sup> nuclear reactor is being planned at Lake Anna with cooling towers that will use from between 16 and 24 million gallons a day from the lake. Construction activities have begun with site clearing, facility buildings, etc. The cooling towers will blow from 16 to 24 million gallons of Lake Anna water into the air around Lake Anna at many times throughout the year. The nuclear plant water intake is downstream from the sewage effluent discharge point. What is the cumulative impact to the public for blowing the chemicals and other nutrients that are not removed from the sewage processing and/or diluted raw sewage when there is a sewage processing plant mechanical or human failure, earthquake or flood?

***Staff Response:***

9VAC25-260-20 states that mixing zones shall not be allowed for effluents discharged to wetlands, swamps, marshes, lakes or ponds. As such, effluent limits are established assuming worst-case, critical conditions where there is no dilution available in the receiving water and the facility discharges at full design flow. In reality, the discharge from the Lake Anna Environmental Services STP is subject to dilution upon entering Lake Anna.

The intake for the Dominion – North Anna Power Station is located approximately 3.42 rivermiles downstream of the discharge location. Because of the distance and dilution available, staff has no basis for concern.

**Public Comment #37:**

We applaud the move to Class 1 reliability for the pump stations for the existing plant. We request that the permit be modified to include wording that would provide the same reliability class for any future pumping stations that may be added to the existing system.

***Staff Response:***

All municipal sewage collection, treatment, and/or reclamation system projects that fall under the Sewage Collection and Treatment Regulations (9VAC25-790) must apply for a Certificate to Construct (CTC) and a Certificate to Operate (CTO). Any CTC application for a new pump station must also include a reliability classification worksheet as part of the submittal.

In accordance with the reliability classification assessment, Reliability Class I is required if the pump station were to overflow and there is high probability of public contact with the wastewater. That is, is the station close to residential/commercial/institutional areas and/or recreational areas (boat landings, posted swimming/fishing/boating areas, parks) such that an overflow would likely present a public health hazard? Given the proximity of the Lake Anna Environmental Services STP to Lake Anna, any new pump station shall require Reliability Class I.

It is staff's best professional judgement that the Sewage Collection and Treatment Regulations and subsequent Certificate to Construct (CTC) and a Certificate to Operate (CTO) processes are sufficient and no further clarification is warranted within the VPDES permit.

**Public Comment #38:**

The expired permit fact sheet contains the following language: "**Lake Anna is unusual from most state waters, it was constructed for the primary purpose of providing cooling water to an electrical power station. In addition to cooling water, Lake Anna also provides the recreational uses, aquatic life uses, and all other uses defined in 9VAC25-260-10.A. Lake Anna is one of Virginia's prominent sport fisheries.**" We do not understand the deletion of this language and believe that it provides context for the permit. We request that the language be included in the fact sheet associated with this permit.

***Staff Response:***

**It was staff's best professional judgement that the above wording be removed from the fact sheet as it was more appropriate for inclusion in the Dominion – North Anna Power Station permit rather than the Lake Anna Environmental Services STP permit given Lake Anna was constructed for and by Dominion.**

The draft permit was prepared to protect the Virginia Water Quality Standards (9VAC25-260 et seq.) applicable to the receiving stream, Lake Anna. These are the same standards used to characterize and protect all waters of the Commonwealth. The permit as drafted will meet the applicable regulatory standards that have been established to protect the water quality of Lake Anna and its beneficial uses. As such, staff does not feel the language provides **any context for the permit associated with the Lake Anna Environmental Services STP and is not necessary for inclusion in the fact sheet.**

**Public Comment #39:**

I have looked online and asked some contacts but cannot find out who the Lake Anna Environmental company is, or what they are doing , which development if any, and why they feel they need to use Lake Anna as part of their septic system. I have heard it was Lake Anna Plaza, (Is that Lake Anna Island realty? or [sic] the Food Lion strip mall?) then [sic] that this is part of Cutalong, and no one seems to be sure!

***Staff Response:***

Lake Anna Environmental Services, Incorporated is the current owner of the Lake Anna Environmental Services STP (formerly the Lake Anna Family Campground STP). The facility treats domestic sewage from the Lake Anna Plaza area of Louisa County near the Route 208 bridge. Neither the Food Lion complex nor Cutalong are connected to the Lake Anna Environmental Services STP.

**Public Comment #40:**

Someone who I will not name who is my Rep on a local consortium here told me that the developer can put in any kind of sewage process it wants. There are no rules. After all that is why the cows can poop in the lake. That is what she told me. You can see we are desparate [sic] for information here!

***Staff Response:***

The draft permit specifies the requirements and conditions that the permittee must meet in order to ensure water quality is maintained and protected. The permit does not specify the type of treatment to be employed. However, the design of wastewater treatment plants must be in accordance with the Sewage Collection and Treatment Regulations (9VAC25-790 et seq.).

**Public Comment #41:**

I do not believe that there will be no negative consequences to people, plants and species. They and you need to convince me of this. It just doesn't seem like a good idea. Surely they must have alternatives that we can agree on. Let's share.

***Staff Response:***

The draft permit was prepared to protect the Virginia Water Quality Standards (9VAC25-260 et seq.) applicable to the receiving stream, Lake Anna. These are the same standards used to characterize and protect all waters of the Commonwealth. The permit as drafted will meet the applicable regulatory standards that have been established to protect the water quality of Lake Anna and its beneficial uses.

**Public Comment #42:**

Lake Anna and the North Anna River is a part of the York River basin of the Chesapeake Watershed. All downstream users should be made aware of this permit request so they too can comment and advise. Has this been done? Has the Environmental Protection Agency been involved?

***Staff Response:***

Section 62.1-44.15:4 of the Code of Virginia requires DEQ to notify each locality and riparian property owner to a distance one half mile downstream on nontidal waters when a permit application is received for the issuance of a new or modified permit or a permit reissuance where an expansion is planned.

By letter dated April 27, 2011, DEQ notified the Louisa County and Spotsylvania County Administrators and the Louisa County and Spotsylvania County Board of Supervisors of the proposed expansion associated with the reissuance. Riparian property owners identified one half mile upstream and one half mile downstream of the discharge location on both the Louisa County and Spotsylvania County shores of Lake Anna were also notified of the proposed expansion by letter dated April 27, 2011.

In accordance with a Memorandum of Understanding regarding permit and enforcement programs between the State Water Control Board and the Regional Administrator, Region III, U.S. Environmental Protection Agency (EPA), the draft permit did not require review by EPA.

**Public Comment #43:**

Also you might notice that controversial actions by developers always takes place in the non-summer months to avoid the attention and notice of sixty percent of the population here who are summer residents.

***Staff Response:***

In accordance with 9VAC25-31-100, all permittees with a currently effective permit shall submit a new application at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the board. The application for the Lake Anna Environmental Services STP was to be submitted no later than March 11, 2011. Processing of the permit has been ongoing since May 17, 2011.

**Public Comment #44:**

According to the information I have received, only about 10-15% of the previous permitted capacity (20,000 gal.) was being used and to increase the allowable capacity to 99,000 gal. when there has not been a substantiated need in my opinion, is unreasonable.

***Staff Response:***

A statement of need is not required by the VPDES program. An applicant may request an expansion without limitation of flow. As explained by the permittee during the September 9, 2011 meetings with the Lake Anna Civic Association and the Friends of Lake Anna, the request for the expansion has been made in anticipation of future need due to continued growth in the area. Louisa County approval of the proposed expansion is not required under statute or regulation.

The draft permit was prepared to protect the Virginia Water Quality Standards (9VAC25-260 et seq.) applicable to the receiving stream, Lake Anna. These are the same standards used to characterize and protect all waters of the Commonwealth. The permit as drafted will meet the applicable regulatory standards that have been established to protect the water quality of Lake Anna and its beneficial uses.

**Public Comment #45:**

I respectfully request that a public hearing be permitted and if a permit is issued that it not exceed the previous capacity.

***Staff Response:***

A statement of need is not required by the VPDES program. An applicant may request an expansion without limitation of flow. DEQ has no authority under statute or regulation to deny the request for expansion to 0.099 MGD.

The draft permit was prepared to protect the Virginia Water Quality Standards (9VAC25-260 et seq.) applicable to the receiving stream, Lake Anna. These are the same standards used to characterize and protect all waters of the Commonwealth. The permit as drafted will meet the applicable regulatory standards that have been established to protect the water quality of Lake Anna and its beneficial uses.

**Public Comment #46:**

Mr. B. J. Blount has for years allowed his family money to get what he wants in Spotsylvania County and Louisa County. It is time to stop the Blount family from dumping raw sewage into a lake that is used not only for Dominion Virginia Power But also for our children's recreation.

***Staff Response:***

DEQ received notification of a change of ownership for the facility on February 4, 2011. The Lake Anna Environmental Services STP is no longer owned by Mr. Blount.

**Public Comment #47:**

This effluent is particularly bad because the effluent is being discharged into the Lake adjacent to two swimming areas, that of the Lake Anna Condominiums and the Windwood Coves subdivision (my own community). Our children and grandchildren swim in this water. I understand from DEQ that there are pollutants in this effluent which makes it not fit to drink. It is wrong for the State of Virginia to ask our children to drink these pollutants.

***Staff Response:***

The Water Quality Standards include provisions for facilities that discharge to waters designated as Public Water Supplies; Lake Anna has not been designated as a Public Water Supply in the Water Quality Standards. Furthermore, drinking water standards are not applicable to this discharge since this is a wastewater treatment facility and not a potable water treatment plant producing drinking water.

The draft permit was prepared to protect the Virginia Water Quality Standards (9VAC25-260 et seq.) applicable to the receiving stream, Lake Anna. These are the same standards used to characterize and protect all waters of the Commonwealth. The permit as drafted will meet the applicable regulatory standards that have been established to protect the water quality of Lake Anna and its beneficial uses.

**Public Comment #48:**

There are people that hold the opinion that because Dominion (Dominion Resources) has de facto taken possession of the effluent when the effluent enters and crosses Dominion owned land and because Dominion, in fact, owns the bottom of the Lake and thus the discharge into the Lake is a discharge by Dominion, thus Dominion must be made be a party to the application and must appear as an applicant. If DEQ has an opinion counter to this one, would you please provide the basis for that opinion.

***Staff Response:***

Pursuant to 9VAC25-31-10, owner is defined as “.....any public or private institution, corporation, association, firm or company organized or existing under the laws of this or any other state or country, or any officer or agency of the United States, or any person or group of persons acting individually or as a group that owns, operates, charters, rents, or otherwise exercises control over or is responsible for any actual or potential discharge of sewage, industrial wastes, or other wastes to state waters, or any facility or operation that has the capability to alter the physical, chemical, or biological properties of state waters in contravention of § 62.1-44.5 of the Code of Virginia”. Dominion Resources does not own or operate the Lake Anna Environmental Services STP and has no control or responsibility for the discharge. As such, Dominion Resources cannot be designated as a co-permittee based only on their ownership of the land that the effluent pipe crosses.

Dominion Resources, Incorporated did not voice any concerns or objections on the draft permit during the public comment period which ended on November 14, 2011.

**Public Comment #49:**

I would like to point out that almost all hearing requests have been written by one individual, copied and have had different names attached. This does not seem to fit the intent of the request for public hearing process. My understanding is a requirement for a minimum of 25 individual requests residents making a request, not a petition. Not only are these requests essentially a petition but a majority of the requests are titled in the subject line "FOIA – petition for public hearing".

***Staff Response:***

Section 62.1-44.15:02 of the State Water Control Law specifically provides for the submittal of individual requests. Staff received 98 requests for hearing in the form of a petition letter. Of the 98 requests received, three contained more than one signature. A petition letter with more than one signature is considered a single request. As such, the three petition letters which contained more than one signature are each considered a single request.

**Public Comment #50:**

Although LAES is happy to speak to public concerns the hearing process will cause a delay in our permit renewal and will increase operations costs at a time when the economy does not allow for increased expense. Delay in growth in these poor economic times does nothing but decrease job creation.

***Staff Response:***

There are no issues for staff to address in this comment.

